

TENT COOPERATION TRE, Y

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 20 April 2000 (20.04.00)	
International application No. PCT/FI99/00630	Applicant's or agent's file reference PL53PCT
International filing date (day/month/year) 15 July 1999 (15.07.99)	Priority date (day/month/year) 17 July 1998 (17.07.98)
Applicant SALMINEN, Kai et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

02 February 2000 (02.02.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer C. Villet
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PCT COOPERATION TRE/ Y

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From the INTERNATIONAL BUREAU

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

To:

SEPPÖ LAINE OY
Itämerenkatu 3 B
FIN-00180 Helsinki
FINLANDE

Date of mailing (day/month/year) 17 October 2000 (17.10.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference PL53PCT	
International application No. PCT/FI99/00630	International filing date (day/month/year) 15 July 1999 (15.07.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address

HELSINGIN PUHELIN OYJ -
HELSINGFORS TELEFON ABP
Korkeavuorenkatu 35 - 37
FIN-00130 Helsinki
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358-9-606 109

Facsimile No.

+358-9-603 894

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☐ the address ☐ the nationality ☐ the residence

Name and Address

ELISA COMMUNICATIONS OYJ
Korkeavuorenkatu 35 - 37
FIN-00130 Helsinki
Finland

State of Nationality

FI

State of Residence

FI

Telephone No.

+358-9-606 109

Facsimile No.

+358-9-603 894

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Athina Nickitas-Etienne

Telephone No.: (41-22) 338.83.38

3
REC'D 24 OCT 2000

WIPO

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PL 53 PCT	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/FI99/00630	International filing date (day/month/year) 15.07.1999	Priority date (day/month/year) 17.07.1998
International Patent Classification (IPC) or national classification and IPC ₇ H 04 L 12/24, H 04 L 12/66, H 04 L 12/58, H 04 M 11/06		
Applicant ELISA COMMUNICATIONS OYJ [Helsingin Puhelin OYJ - Helsingfors Telefon ABP et al]		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
- ☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02.02.2000	Date of completion of this report 16.10.2000
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. 08-667 72 88	Authorized officer Hans Bagge af Berga /MN Telephone No. 08-782 25 00

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI99/00630

I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☐ the international application as originally filed.
- ☒ the description, pages 1-5, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☒ the claims, Nos. _____, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. 1-3, filed with the letter of 28.09.2000,
 Nos. _____, filed with the letter of _____.
- ☒ the drawings, sheets/fig 1-2, as originally filed,
 sheets/fig _____, filed with the demand
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/FI99/00630

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-3</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-3</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-3</u>	YES
	Claims	_____	NO

2. Citations and explanations

The invention

The claimed invention relates to a method and system for controlling an Internet service. The control commands of the service provider are transmitted via a telephone network to a voice response system that further passes the control commands in real time to an Internet server.

Conventionally, Internet services have been controlled via a computer equipped with an Internet connection. A disadvantage of the computer-based arrangement of access control to a service has been that the user needs a computer with an installed Internet connection facility.

According to the invention, the features of the claimed invention overcome this disadvantage.

Documents cited in the International Search Report

D1 WO, A1, 98/21872
D2 EP, A2, 0 782 318
D3 WO, A1, 98/26543
D4 WO, A1, 98713993
D5 WO, A1, 98/04065

Documents D2-D5 are cited in the International Search Report to show the general technological background of the invention.

Document D1 describes a system for controlling an Internet site containing Voice Web Pages. A user/provider can alter the information by giving commands using a telephone. The commands are transmitted to a voice response system via a telephone network (see abstract; page 6, line 33 - page 7, line 35; page 22, line 10-33; fig. 1, 9).

.../...

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: V

Claims 1-3

Claims 1 and 3 describe a method and a system for controlling an Internet service. According to the method defined in claim 1 the control commands of the service provider are transmitted via a telephone network to a voice response system that further passes the control commands in real time to an Internet server. Furthermore, the voice response system transmits acknowledgement information on a successful control action as a short message to the subscriber controlling the system.

According to the system defined in claim 3 the system includes a text message centre for transmitting acknowledgement messages to the subscriber controlling the system.

In document D1 there is no information about providing an acknowledgement signal to a user/provider controlling the system. Furthermore, there are no suggestions leading a person skilled in the art towards such a feature.

Consequently, there is no information in D1 leading a person skilled in the art towards the characterising feature of claims 1 and 3. Namely the feature in (i) claim 1 of transmitting an acknowledgement information as a short message (ii) claim 3 of providing a text message centre for transmitting acknowledgement messages.

Therefore, the invention defined in claims 1 and 3 is not considered obvious to a person skilled in the art and consequently is considered to involve an inventive step (IS).

Claim 2 is a dependent claim to claim 1. Consequently, bearing in mind the argumentation regarding claim 1, the invention according to claim 2 fulfils the requirement of inventive step (IS).

Conclusion

The invention defined by claims 1-3 does fulfil the requirement of novelty (N) and is considered to involve an inventive step (IS). The invention according to claims 1-3 has industrial applicability (IA).

Claims:

1. Method for controlling an Internet service such as an e-commerce site, in which method the service provider is given a possibility of controlling and steering the progress of the service, in which method the control commands of the service provider are transmitted as dial tone signals (DTMF) via a telephone network (2) to a voice response system (6) that in turn passes the control commands in real time to an Internet server (3),
- characterized in that
- said voice response system (6) transmits the acknowledgement information on a successful control action as a short message to the subscriber (1) controlling the system.
2. Method according to claim 1, characterized in that said voice response system (6) transmits the acknowledgement information on a successful control action as a short message using the CIMD protocol.
3. System for controlling an Internet service, the system comprising an Internet network (4), a plurality of service users (7) and at least one Internet server (3), said system having means for providing commercial services and controlling said services, said system including a voice response system (6) cooperating in real time with said Internet server (3), characterized in that said system includes a text message center (5) for transmitting acknowledgement messages to the subscriber (1) controlling the system.

The demand must be filed directly with the competent International Preliminary Examining Authority or, if two or more Authorities are competent, with the one chosen by the applicant. The full name or two-letter code of that Authority may be indicated by the applicant on the line below:

IPEA/ SE

PCT

CHAPTER II

DEMAND

under Article 31 of the Patent Cooperation Treaty:

The undersigned requests that the international application specified below be the subject of international preliminary examination according to the Patent Cooperation Treaty and hereby elects all eligible States (except where otherwise indicated).

For International Preliminary Examining Authority use only		
Identification of IPEA		Date of receipt of DEMAND
Box No. I IDENTIFICATION OF THE INTERNATIONAL APPLICATION		Applicant's or agent's file reference PL 53 PCT
International application No. PCT/FI99/00630	International filing date (day/month/year) 15 July 1999 (15.07.99)	(Earliest) Priority date (day/month/year) 17 July 1998 (17.07.98)
Title of invention Method and system for controlling an Internet service		
Box No. II APPLICANT(S)		
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) HELSINGIN PUHELIN OYJ - HELSINGFORS TELEFON ABP Korkeavuorenkatu 35-37 FIN-00130 Helsinki Finland		Telephone No.:
		Facsimile No.:
		Teleprinter No.:
State (that is, country) of nationality: Finland		State (that is, country) of residence: Finland
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) SALMINEN, Kai Kytötie 59 F FIN-04430 Järvenpää Finland		
State (that is, country) of nationality: Finland		State (that is, country) of residence: Finland
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.) HÄRMÄ, Mika Hiemokuja 3 A 11 FIN-00380 Helsinki Finland		
State (that is, country) of nationality: Finland		State (that is, country) of residence: Finland
<input checked="" type="checkbox"/> Further applicants are indicated on a continuation sheet.		

Continuation of Box No. II APPLICANT(S)

If none of the following sub-boxes is used, this sheet should not be included in the demand.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

KYLÄ-REKOLA, Matti
Kuutamokatu 5 B 43
FIN-02210 Espoo
Finland

State (that is, country) of nationality:
Finland

State (that is, country) of residence:
Finland

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

SALSTE, Tuomas
Mäkitorpantie 29-31 A 12
FIN-00640 Helsinki
Finland

State (that is, country) of nationality:
Finland

State (that is, country) of residence:
Finland

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

State (that is, country) of nationality:

State (that is, country) of residence:

☐ Further applicants are indicated on another continuation sheet.

Box No. III AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The following person is ☒ agent ☐ common representative

and ☒ has been appointed earlier and represents the applicant(s) also for international preliminary examination.

☐ is hereby appointed and any earlier appointment of (an) agent(s)/common representative is hereby revoked.

☐ is hereby appointed, specifically for the procedure before the International Preliminary Examining Authority, in addition to the agent(s)/common representative appointed earlier.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

SEPPO LAINE OY
Itämerenkatu 3 B
FIN-00180 Helsinki
Finland

Telephone No.:

+358-9-68 59 560

Facsimile No.:

+358-9-68 595 610

Teleprinter No.:

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No. IV BASIS FOR INTERNATIONAL PRELIMINARY EXAMINATION
Statement concerning amendments:*

1. The applicant wishes the international preliminary examination to start on the basis of:

☒ the international application as originally filed

the description

☐ as originally filed

☐ as amended under Article 34

the claims

☐ as originally filed

☐ as amended under Article 19 (together with any accompanying statement)

☐ as amended under Article 34

the drawings

☐ as originally filed

☐ as amended under Article 34

2. ☐ The applicant wishes any amendment to the claims under Article 19 to be considered as reversed.

3. ☐ The applicant wishes the start of the international preliminary examination to be postponed until the expiration of 20 months from the priority date unless the International Preliminary Examining Authority receives a copy of any amendments made under Article 19 or a notice from the applicant that he does not wish to make such amendments (Rule 69.1(d)). *(This check-box may be marked only where the time limit under Article 19 has not yet expired.)*

* Where no check-box is marked, international preliminary examination will start on the basis of the international application as originally filed or, where a copy of amendments to the claims under Article 19 and/or amendments of the international application under Article 34 are received by the International Preliminary Examining Authority before it has begun to draw up a written opinion or the international preliminary examination report, as so amended.

Language for the purposes of international preliminary examination: English
☐ which is the language in which the international application was filed.

☒ which is the language of a translation furnished for the purposes of international search.

☐ which is the language of publication of the international application.

☐ which is the language of the translation (to be) furnished for the purposes of international preliminary examination.

Box No. V ELECTION OF STATES

The applicant hereby elects all eligible States *(that is, all States which have been designated and which are bound by Chapter II of the PCT)*

excluding the following States which the applicant wishes not to elect:

Box No. VI CHECK LIST

The demand is accompanied by the following elements, in the language referred to in Box No. IV, for the purposes of international preliminary examination:

- | | | |
|--|---|--------|
| 1. translation of international application | : | sheets |
| 2. amendments under Article 34 | : | sheets |
| 3. copy (or, where required, translation) of amendments under Article 19 | : | sheets |
| 4. copy (or, where required, translation) of statement under Article 19 | : | sheets |
| 5. letter | : | sheets |
| 6. other (specify) | : | sheets |

For International Preliminary
Examining Authority use only

received

not received

☐☐☐☐☐☐☐☐☐☐☐☐

The demand is also accompanied by the item(s) marked below:

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> fee calculation sheet | 4. <input type="checkbox"/> statement explaining lack of signature |
| 2. <input type="checkbox"/> separate signed power of attorney | 5. <input type="checkbox"/> nucleotide and or amino acid sequence listing in computer readable form |
| 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: | 6. <input type="checkbox"/> other (specify): |

Box No. VII SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the demand).

For the Applicants

Seppo Laine Oy

Jari Lipsanen

For International Preliminary Examining Authority use only

1. Date of actual receipt of DEMAND:

2. Adjusted date of receipt of demand due to CORRECTIONS under Rule 60.1(b):

3. ☐ The date of receipt of the demand is AFTER the expiration of 19 months from the priority date and item 4 or 5, below, does not apply.

☐ The applicant has been informed accordingly.

4. ☐ The date of receipt of the demand is WITHIN the period of 19 months from the priority date as extended by virtue of Rule 80.5.

5. ☐ Although the date of receipt of the demand is after the expiration of 19 months from the priority date, the delay in arrival is EXCUSED pursuant to Rule 82.

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Demand received from IPEA on:

PCT REQUEST

Original (for SUBMISSION) - printed on 15.07.1999 10:37:03 AM

PL53PCT

0	For receiving Office use only	
0-1	International Application No.	PCT/FI 9 9 / 0 0 6 3 0
0-2	International Filing Date	15 JUL 1999 (15. 07. 99)
0-3	Name of receiving Office and "PCT International Application"	The Finnish Patent Office PCT International Application
0-4	Form - PCT/RO/101 PCT Request Prepared using	PCT-EASY Version 2.84 (updated 01.06.1999)
0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	National Board of Patents and Registration (Finland) (RO/FI)
0-7	Applicant's or agent's file reference	PL53PCT
I	Title of invention	METHOD AND SYSTEM FOR CONTROLLING AN INTERNET SERVICE
II	Applicant	applicant only
II-1	This person is:	all designated States except US
II-2	Applicant for	HELSEINGIN PUHELIN OYJ - HELSEINGFORS
II-4	Name	TELEFON ABP
II-5	Address:	Korkeavuorenkatu 35 - 37 FIN-00130 Helsinki Finland
II-6	State of nationality	FI
II-7	State of residence	FI
II-8	Telephone No.	+358-9-606 109
II-9	Facsimile No.	+358-9-603 894
III-1	Applicant and/or inventor	applicant and inventor
III-1-1	This person is:	US only
III-1-2	Applicant for	SALMINEN, Kai
III-1-4	Name (LAST, First)	Kytötie 59 F
III-1-5	Address:	FIN-04430 Järvenpää Finland
III-1-6	State of nationality	FI
III-1-7	State of residence	FI

PCT REQUEST

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III-2	Applicant and/or inventor	
III-2-1	This person is:	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	HÄRMÄ, Mika
III-2-5	Address:	Hiomokuja 3 A 11 FIN-00380 Helsinki Finland
III-2-6	State of nationality	FI
III-2-7	State of residence	FI
III-3	Applicant and/or inventor	
III-3-1	This person is:	applicant and inventor
III-3-2	Applicant for	US only
III-3-4	Name (LAST, First)	KYLÄ-REKOLA, Matti
III-3-5	Address:	Kuutamokatu 5 B 43 FIN-02210 Espoo Finland
III-3-6	State of nationality	FI
III-3-7	State of residence	FI
III-4	Applicant and/or inventor	
III-4-1	This person is:	applicant and inventor
III-4-2	Applicant for	US only
III-4-4	Name (LAST, First)	SALSTE, Tuomas
III-4-5	Address:	Mäkitorpantie 29 - 31 A 12 FIN-00640 Helsinki Finland
III-4-6	State of nationality	FI
III-4-7	State of residence	FI
IV-1	Agent or common representative; or address for correspondence	
	The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name	SEPPO LAINE OY
IV-1-2	Address:	Itämerenkatu 3 B FIN-00180 Helsinki Finland
IV-1-3	Telephone No.	+358-9-68 59 560
IV-1-4	Facsimile No.	+358-9-68 59 5610
IV-1-5	e-mail	seppo.laine@selpat.fi
V	Designation of States	
V-1	Regional Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	EP: AT BE CH&LI CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE and any other State which is a Contracting State of the European Patent Convention and of the PCT
V-2	National Patent (other kinds of protection or treatment, if any, are specified between parentheses after the designation(s) concerned)	DE GB NO SE US

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V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.	
V-6	Exclusion(s) from precautionary designations	NONE
VI-1	Priority claim of earlier national application	
VI-1-1	Filing date	17 July 1998 (17.07.1998)
VI-1-2	Number	981637
VI-1-3	Country	FI
VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1
VII-1	International Searching Authority Chosen	Swedish Patent Office (ISA/SE)
VIII	Check list	number of sheets electronic file(s) attached
VIII-1	Request	4 -
VIII-2	Description	5 -
VIII-3	Claims	2 -
VIII-4	Abstract	1 pl53tii.txt
VIII-5	Drawings	2 -
VIII-7	TOTAL	14
	Accompanying items	paper document(s) attached electronic file(s) attached
VIII-8	Fee calculation sheet	✓ -
VIII-9	Separate signed power of attorney	✓ -
VIII-16	PCT-EASY diskette	- diskette
VIII-17	Other (specified):	copy of official action -
VIII-18	Figure of the drawings which should accompany the abstract	1
VIII-19	Language of filing of the international application	Finnish
IX-1	Signature of applicant or agent	
IX-1-1	Name	SEPPO LAINE OY
IX-1-2	Name of signatory	Jari Lipsanen

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10-1	Date of actual receipt of the purported international application	(15 -07- 1999)	15 JUL 1999
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10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/SE
10-6	Transmittal of search copy delayed until search fee is paid	X

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11-1	Date of receipt of the record copy by the International Bureau	16 AUGUST 1999	(16. 08. 99)
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1/2

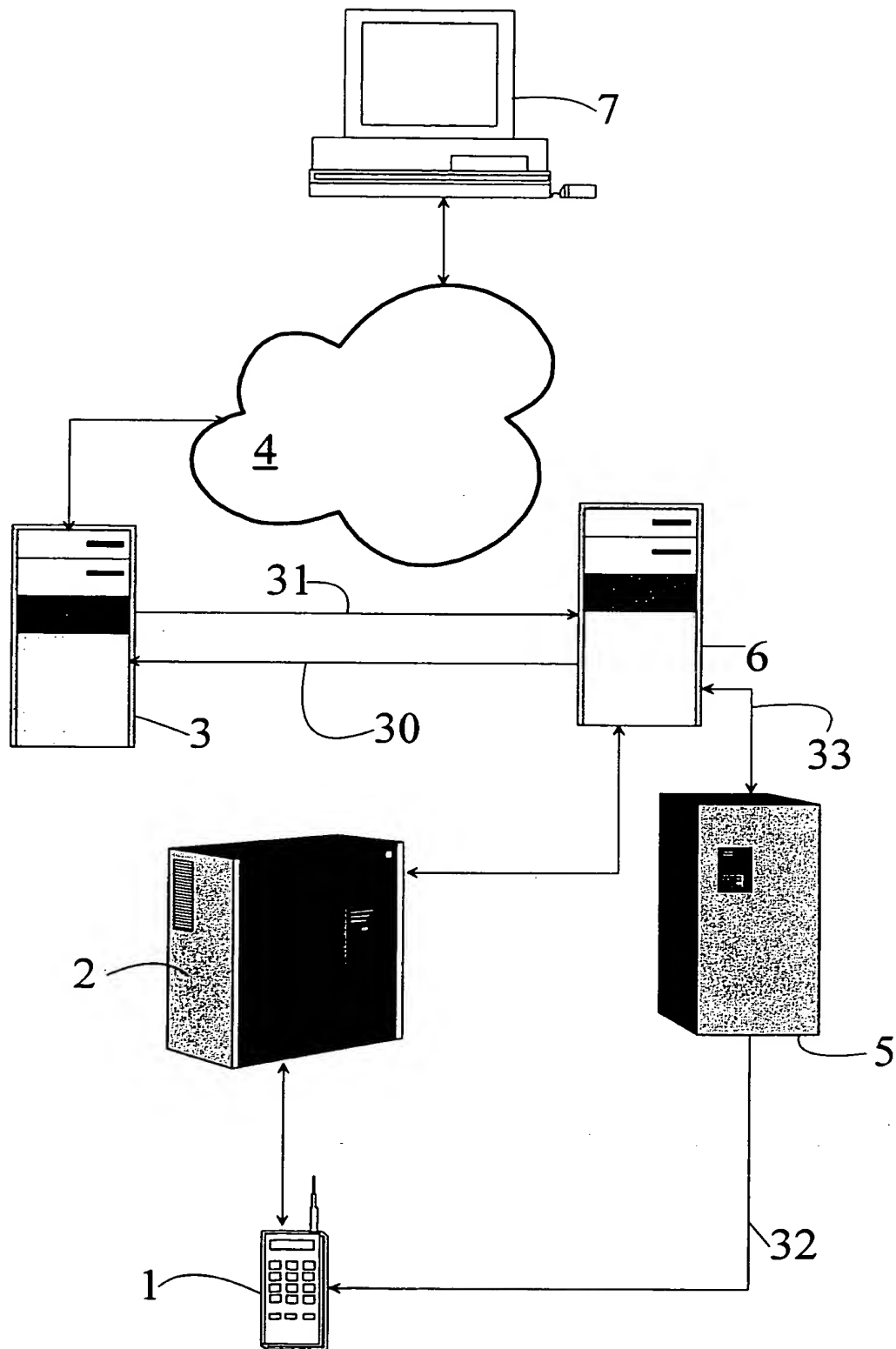


Fig. 1

2/2

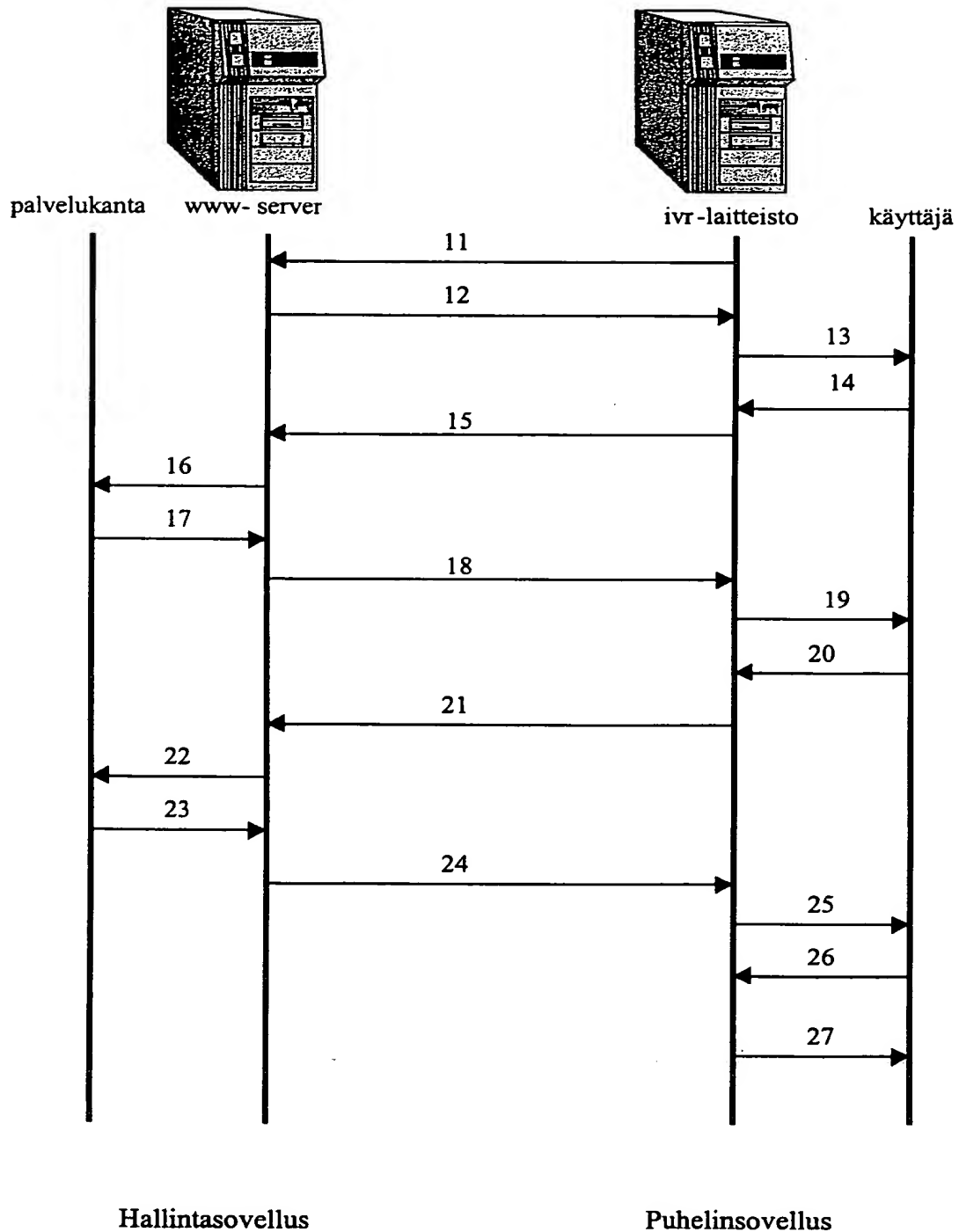


Fig. 2

Menetelmä ja järjestelmä Internet-palvelun hallintaa varten

Keksinnön kohteena on patenttivaatimuksen 1 johdannon mukainen menetelmä Internet-palvelun hallintaa varten.

5

Keksinnön kohteena on myös järjestelmä Internet-palvelun hallintaa varten.

10

Keksintö on tarkoitettu Internet-palvelun, esimerkiksi Internet-kaupan hallintaan. Hallinta tapahtuu puhelimen avulla. Puhelimella voidaan ohjata palvelun tilaa ja toimintaa sekä vastaanottaa raportteja palvelun toiminnasta.

15

Perinteisesti internet-palveluja on hallittu tietokoneella, jossa on Internet-yhteys. Käyttöliittymänä on ollut yleensä Internet-selain tai telnet-yhteys. Palvelua on voitu hallita myös suoraan palvelimelta käsin.

20

Tietokoneella tapahtuvan hallinnan haittapuoli on se, että käyttäjä tarvitsee tietokoneen ja Internet-yhteyden. Tämä vaikeuttaa palvelun hallintaa ja rajoittaa käyttäjän mahdollisuuksia liikkua. Lisäksi kannettavan tietokoneen ja langattoman Internet-yhteyden kustannukset ovat suuret.

25

Keksinnön tarkoituksena on poistaa edellä kuvatut puutteellisuudet ja aikaansaada aivan uudentyyppinen menetelmä ja järjestelmä Internet-palvelun hallintaan.

Keksintö perustuu Internet-palvelimen, ääniautomatiikkajärjestelmän, puhelimen ja tekstiviestipalvelun yhdistämiseen.

30

Hallittaessa internet-palvelua käyttäjä seuraa ääniautomatiikkajärjestelmän tarjoaman äänivalikon ohjeita. Edetäkseen ja toteuttaakseen toimintoja käyttäjä antaa komentoja DTMF-merkeillä tai puhumalla. Käyttäjä saa palautteen joko äänenä tai GSM-tekstiviestinä.

Täsmällisemmin sanottuna keksinnön mukaiselle menetelmälle on tunnusomaista se, mikä on esitetty patenttivaatimuksen 1 tunnusmerkkiosassa.

5 Keksinnön mukaiselle järjestelmälle puolestaan on tunnusomaista se, mikä on esitetty patenttivaatimuksen 5 tunnusmerkkiosassa.

Keksinnön avulla saavutetaan huomattavia etuja.

10 Puhelimen käyttämisen etuna palvelun ohjauksessa on erityisesti sen saatavuus. Hallitakseen palvelua tai sen osaa käyttäjä tarvitsee ainoastaan puhelimen. Käyttäjä ei tarvitse tietokonetta eikä internet-yhteyttä. Jos käyttäjänä on matkapuhelin, on internet-palvelu hallittavissa melkein mistä ja milloin tahansa. Tällä on erityisen suuri merkitys operatiivisissa tietojärjestelmissä kuten internet-kaupankäynnissä.

15 Keksintöä ryhdytään seuraavassa tarkastelemaan esimerkkien avulla ja oheisiin piirustuksiin viitaten.

Kuvio 1 esittää yhtä keksinnön mukaista järjestelmäkokoontaa lohkokaaaviona.

20 Kuvio 2 esittää kaaviollisesti yhtä esimerkkiä keksinnön mukaisen menetelmän etenemisestä ajallisesti.

25 Kuvion 1 mukaisesti käyttäjä soittaa puhelimella 1 puhelinkeskuksen 2 kautta ääniautomatiikkajärjestelmään 6. Ääniautomatiikkajärjestelmä 6 koostuu fyysisestä palvelimesta, liitännästä puhelinverkkoon (kortti), palvelinohjelmistosta sekä puheluihin vastaavasta sovelluksesta.

Ääniautomaatiikan sovellus 6 tarjoaa käyttäjälle valikon, josta käyttäjä valitsee haluamansa toiminteen. Toiminne valitaan äänitaajuusvalinnalla (DTMF). Sovellus kysyy käyttäjältä 1 tarvittavat lisäparametrit. Sovellus muodostaa tiedoista sanoman. Sanoma 30 lähetetään Internet-palvelimelle 3 esimerkiksi Socket-yhteydellä. Internet-palvelin 3 puolestaan on yhdistetty Internet-verkkoon⁴, jonka välityksellä palvelun käyttäjät 7 voivat esimerkiksi tehdä ostoksia Internetin 4 kautta.

Internet-palvelimella 3 hallintasovellus valvoo ennalta määrättyä porttia. Vastaanottaessaan sanoman 30 ääniautomaatiikan sovellukselta 6 hallintasovellus tulkitsee sanoman 30 ja tekee halutut toimenpiteet. Tämän jälkeen hallintasovellus palauttaa vastaavalla tavalla ääniautomaatiikalle 6 tiedon 31 käskyn suorittamisen onnistumisesta tai epäonnistumisesta. Lisäparametreissa voidaan välittää myös muuta informaatiota esimerkiksi muodostettu raportti.

Käyttäjä 1 saa tiedon käskyn suorittamisen onnistumisesta puheena ääniautomaatiikasta 6. Ääniautomaatiikka 6 voi lähettää tiedot myös lyhytsanomana. Lyhytsanoma lähetetään reaaliajassa ottamalla yhteys 33 esimerkiksi CIMD-protokollalla matkapuhelinoperaattorin lyhytsanomakeskukseen 5. Lyhytsanomakeskus 5 hoitaa viestin 32 lähettämisen radioteitse käyttäjälle 6.

Ääniautomaatiikan sovellus 6 ja Internet-palvelin 3 toimivat yhdessä reaaliaikaisesti ja käyttäjä saa haluamansa palautteen välittömästi puhelun aikana. Puhelun aikana voidaan suorittaa useita käskyjä.

Ääniautomaatiikkajärjestelmä voidaan korvata älyverkon tiedotuslaitteella (IP). Tässä hakemuksessa näitä laitteistoja ja muita vastaavia samoihin toimintoihin kykeneviä laitteistoja kutsutaan yleisemmin ääniviestijärjestelmiksi.

Kuvion 2 mukaisesti WWW-serverin (sisältää varsinaisen www-palvelimen, kaupankäynnin ohjelmistot, hallintapalvelimen, tietokantoja) ohjaaminen IVR- eli ääniautomaatiikkalaitteella voi tapahtua seuraavasti:

Vaiheet:

11. IVR avaa socket-yhteyden www-serverin ennalta päätettyyn porttiin esim 2345, jossa vastaa hallintapalvelin.
12. Hallintapalvelin hyväksyy yhteyden ja lähettää IVR-laitteelle kuittauksen.
13. Ääniautomatiikka laite kysyy soittajalta tunnusta ja salasanaa.
- 5 14. Käyttäjä antaa tunnuksen ja salasanan puhelimen numeronäppäimistöllä. Tunnus ja salasana välittyvät IVR-laitteistolle DTMF-merkkeinä.
15. Salasana välitetään hallintapalvelimelle socket-yhteyttä pitkin.
16. Hallintapalvelin tekee kyselyn kannasta tunnuksen ja salasanan hyväksyttävyyden selvittämiseksi.
- 10 17. Paluuarvo kyselystä välittyy hallintapalvelimelle.
18. Hallintapalvelin välittää tiedon salasanan oikeellisuudesta IVR:ään socketia käyttäen.
19. Mikäli salasana oli hyväksyttävä lukee IVR-laite asiakkaalle menun, jos salasana tai tunnus oli virheellinen tieto virheellisyydestä soitetaan asiakkaalle ja palvelu loppuu.
- 15 20. Asiakas valitsee menun mukaisen valinnan ja painaa puhelimensa kyseistä numeroa. DTMF-merkki välittyy IVR:ään. Jos menussa valitaan lopeta palvelu siirrytään kohtaan 16.
21. IVR lähettää socketia käyttäen hallintapalvelimelle komennon. Mahdollisia komentoja ovat esimerkiksi seuraavat:
- 20
- | | |
|-----------|---------------------------------------|
| "ping 1" | Tarkista onko kauppa numero yksi auki |
| "stats 2" | Tilastotietojen kysely kaupasta 2 |
| "open 1" | Avaa kauppa numero 1 |
| "close 1" | Sulje kauppa 1 |
| 25 "exit" | Sulje yhteys |
22. Hallintapalvelin päivittää tai kyselee palvelukantaa halutulla tavalla. Päivitykset tapahtuvat reaaliaikaisesti. Näin asiakkaat saavat välittömästi www-sivuille tullessaan päivitettyt tiedot; esimerkiksi kauppa on suljettu.
23. Kyselyn arvot tai tiedot päivityksen onnistumisesta välittyvät
- 30 hallintapalvelimelle
24. Hallintapalvelin lähettää IVR:lle socketia käyttäen tiedon toiminnon onnistumisesta (0 = ei onnistunut, 1 = onnistui) ja mahdolliset viestit kuten kyselyn tiedot. Mahdollisia paluuarvoja ovat esimerkiksi:

"0 cannot open"

Kaupan avaaminen

epäonnistui

"1 shop opened"

Kaupan avaaminen onnistui

"1 visitors: 123 sales: 53421 mk"

Stats-komennolla kysytyjen

tilastotietojen palautus

"1 shop ok"

Ping-komennon paluuarvo, jos

kauppa on kunnossa

"1 shop not working"

Ping-komennon paluuarvo, jos

kaupassa on vikaa

"0 cannot ping"

Ping-komento epäonnistui

25. IVR-laite käsittelee paluuarvon ja palautetun tiedon esimerkiksi antamalla käyttäjälle äänipalautteen tai lähettämällä asiakkaalle tekstiviestin. Palataan kohtaan 19

26. IVR-laite katkaisee socket-yhteyden www-serveriin.

27. Ääniviesti asiakkaalle, että hän on lopettanut palvelun

Keksinnön puitteissa voidaan ajatella myös yllä kuvatuista sovellusmuodoista poikkeavia ratkaisuja. Niinpä ääniautomaatiikan sovelluksessa voidaan käyttää hyväksi myös edistyksellisiä ominaisuuksia kuten text-to-speech eli tekstistä puheeksi - käännöstä tai puheentunnistusta. Lisäksi ääniautomaatiikan sovellukseen voidaan lisätä impulssitunnistus.

Patenttivaatimukset:

1. Menetelmä Internet-palvelun, kuten esimerkiksi Internet-kaupan hallintaa varten, jossa menetelmässä palvelun tarjoajalle annetaan mahdollisuus palvelun ohjaukseen ja hallintaan,

t u n n e t t u siitä, että

palvelun tarjoajan ohjauskäskyt välitetään puhelinverkon (2) kautta ääniviestijärjestelmälle (6), joka puolestaan ohjaa ohjauskäskyt reaaliaikaisesti Internet-palvelimelle (3).

2. Patenttivaatimuksen 1 mukainen menetelmä **t u n n e t t u** siitä, että ohjauskäskyt annetaan äänitaajuusvalinnoilla (DTMF).

3. Patenttivaatimuksen 1 tai 2 mukainen menetelmä, **t u n n e t t u** siitä, että ääniviestijärjestelmä (6) lähettää kuittauksen ohjauksen onnistumisesta järjestelmää ohjaavalle henkilölle (1) lyhytsanomana.

4. Patenttivaatimuksen 3 mukainen menetelmä, **t u n n e t t u** siitä, että ääniautomaattikalaitteisto (6) lähettää kuittauksen ohjauksen onnistumisesta lyhytsanomana käyttäen CIMD-protokollaa.

5. Järjestelmä Internet-palvelun hallintaa varten, joka järjestelmä käsittää Internet-verkon (4), useita käyttäjiä (7) ja ainakin yhden Internet-palvelimen (3), jossa järjestelmässä on välineet kaupallisten palvelujen tuottamiseksi sekä palveluiden ohjaamiseksi, **t u n n e t t u** siitä, että järjestelmä käsittää ääniviestijärjestelmän (6), joka on reaaliaikaisessa yhteydessä Internet-palvelimen (3) kanssa.

7

6. Patenttivaatimuksen 5 mukainen järjestelmä **tunnettu** siitä, että järjestelmä edelleen käsittää tekstiviestikeskuksen (5) kuittausviestien lähettämiseksi järjestelmää ohjaavalle henkilölle (1).

(57) Tiivistelmä:

Tässä julkaisussa on kuvattu menetelmä ja järjestelmä Internet-palvelun, kuten esimerkiksi Internet-kaupan hallintaa varten. Menetelmässä palvelun tarjoajalle annetaan mahdollisuus palvelun ohjaukseen ja hallintaan. Keksinnön mukaisesti palvelun tarjoajan ohjauskäskyt välitetään puhelinverkon (2) kautta ääniviestijärjestelmälle (6), joka puolestaan ohjaa ohjauskäskyt reaaliaikaisesti Internet-palvelimelle (3).

(Kuvio 1)

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PL53PCT

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0-2	International Filing Date	
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0-5	Petition The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	National Board of Patents and Registration (Finland) (RO/FI)
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I	Title of invention	METHOD AND SYSTEM FOR CONTROLLING AN INTERNET SERVICE
II II-1 II-2 II-4 II-5 II-6 II-7 II-8 II-9	Applicant This person is: Applicant for Name Address: State of nationality State of residence Telephone No. Facsimile No.	applicant only all designated States except US HELSINGIN PUHELIN OYJ - HELSINGFORS TELEFON ABP Korkeavuorenkatu 35 - 37 FIN-00130 Helsinki Finland FI FI +358-9-606 109 +358-9-603 894
III-1 III-1-1 III-1-2 III-1-4 III-1-5 III-1-6 III-1-7	Applicant and/or inventor This person is: Applicant for Name (LAST, First) Address: State of nationality State of residence	applicant and inventor US only SALMINEN, Kai Kytötie 59 F FIN-04430 Järvenpää Finland FI FI

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III-2	Applicant and/or inventor	
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V-5	Precautionary Designation Statement In addition to the designations made under items V-1, V-2 and V-3, the applicant also makes under Rule 4.9(b) all designations which would be permitted under the PCT except any designation(s) of the State(s) indicated under item V-6 below. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit.		
V-6	Exclusion(s) from precautionary designations	NONE	
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VI-1-1	Filing date	17 July 1998 (17.07.1998)	
VI-1-2	Number	981637	
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VI-2	Priority document request The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VII-1	International Searching Authority Chosen	Swedish Patent Office (ISA/SE)	
VIII	Check list	number of sheets	electronic file(s) attached
VIII-1	Request	4	-
VIII-2	Description	5	-
VIII-3	Claims	2	-
VIII-4	Abstract	1	pl53tii.txt
VIII-5	Drawings	2	-
VIII-7	TOTAL	14	
VIII-8	Accompanying items	paper document(s) attached	electronic file(s) attached
VIII-8	Fee calculation sheet	✓	-
VIII-9	Separate signed power of attorney	✓	-
VIII-16	PCT-EASY diskette	-	diskette
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10-2	Drawings:	
10-2-1	Received	
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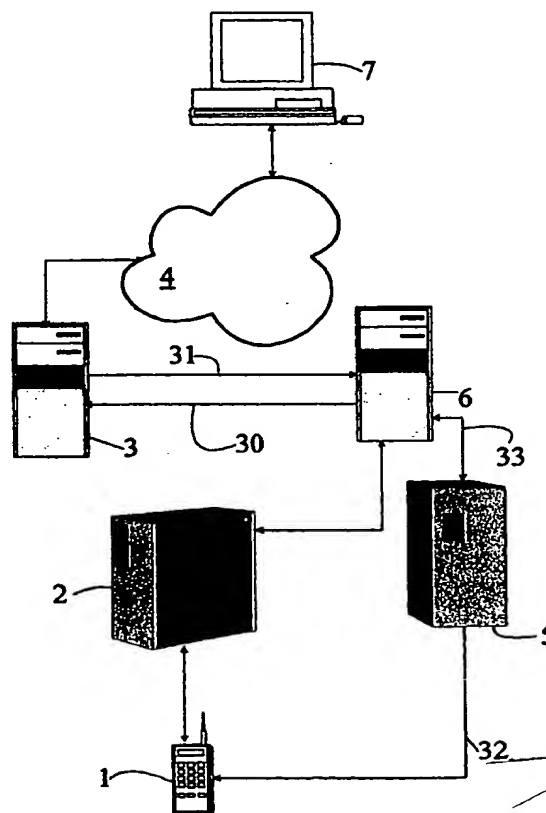
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(21) International Application Number: PCT/FI99/00630 (22) International Filing Date: 15 July 1999 (15.07.99) (30) Priority Data: 981637 17 July 1998 (17.07.98) FI (71) Applicant (for all designated States except US): HELSINGIN PUHELIN OYJ – HELSINGFORS TELEFON ABP [FI/FI]; Korkeavuorenkatu 35 – 37, FIN-00130 Helsinki (FI). (72) Inventors; and (75) Inventors/Applicants (for US only): <u>SALMINEN</u> , Kai [FI/FI]; Kytötie 59 F, FIN-04430 Järvenpää (FI). <u>HÄRMÄ</u> , Mika [FI/FI]; Hiomokuja 3 A 11, FIN-00380 Helsinki (FI). <u>KYLÄ-REKOLA</u> , Matti [FI/FI]; Kuutamokatu 5 B 43, FIN-02210 Espoo (FI). <u>SALSTE</u> , Tuomas [FI/FI]; Mäkitorpantie 29 – 31 A 12, FIN-00640 Helsinki (FI). (74) Agent: SEPPO LAINE OY; Itämerenkatu 3 B, FIN-00180 Helsinki (FI).		(81) Designated States: DE, GB, NO, SE, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i> <i>In English translation (filed in Finnish).</i>	

(54) Title: METHOD AND SYSTEM FOR CONTROLLING AN INTERNET SERVICE

(57) Abstract

The present invention relates to a method and system for controlling an Internet service such as an e-commerce site. The method offers the service provider facilities to control and steer the progress of the service. According to the invention, the control commands of the service provider are transmitted via a telephone network (2) to a voice response system (6) that further passes the control commands in real time to an Internet server (3).



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Method and system for controlling an Internet service

The invention relates to a method according to the preamble of claim 1 for controlling an Internet service.

5

The invention also concerns a system for controlling an Internet service.

Generally, the invention serves the control of an Internet service such as an e-commerce site. The control is arranged to be carried out using a telephone set.

10

With the help of the telephone, the state and function of the service can be steered and reports on the progress of the service received.

15

Conventionally, Internet services have been controlled via a computer equipped with an Internet connection. Herein, an Internet browser or a Telnet connection has served as the user interface. Alternatively, the service has been arranged to be directly controllable from a server.

20

A disadvantage of the computer-based arrangement of access control to a service has been that the user needs a computer with an installed Internet connection facility. This complicates the control of the service and limits the user's freedom of movement. Furthermore, the cost of solving the problem by means of a portable computer and a wireless Internet connection becomes high.

25

It is an object of the invention to overcome the above-mentioned disadvantages and to provide an entirely novel type of method and system for controlling an Internet service.

30

The goal of the invention is achieved through arranging an Internet server to cooperate with an automated voice response system, a telephone set and a text message service.

In the control of an Internet service, the service user follows the instructions issued

by the automated voice response system. To proceed and activate the system functions, the service user issues commands through DTMF signalling and/or uttered phrases. The system response to the calling service user is transmitted as a voice signal or a GSM text message.

5

More specifically, the method according to the invention is characterized by what is stated in the characterizing part of claim 1.

10

Furthermore, the system according to the invention is characterized by what is stated in the characterizing part of claim 5.

The invention offers significant benefits.

15

A particular advantage gained through the use of a telephone set as the control terminal of a service is the easy accessibility of the service. For the control of the service, the service user only needs a telephone. Hence, the user does not require a computer or an Internet connection to gain access to the service. If the user possesses a cellular phone, the Internet service is available almost at any time and in any place. This feature is of a primary importance in operative information systems such as e-commerce sites.

20

In the following, the invention will be examined with the help of exemplifying embodiments by making reference to the attached drawings, in which:

25

Figure 1 shows a flow diagram of an embodiment of a system layout according to the invention; and

Figure 2 shows diagrammatically an example of the temporal progress of the method according to the invention.

30

Referring to Fig. 1, the subscriber first calls a voice response system 6 by placing a call from a telephone 1 via a telephone exchange 2. The voice response system 6 is

comprised of a physical server, a connection to the telephone network (through an interface card), a server software and an application capable of responding to incoming service user calls.

5 The application of the voice response system 6 submits the service user a menu from which the user selects a desired function. The selection is accomplished by means of dual-tone multifrequency (DTMF) dialling. Next, the application requests the service user 1 to submit required defining parameters. A message is then formed by the application from the submitted information. The message 30 is sent to the Internet
10 server 3 via, e.g., a socket connection. The Internet server 3 in turn is connected to an Internet network 4 through which the service users 7 can make, e.g., purchases via said Internet network 4.

At the Internet server 3, the control application monitors a given port. At the receipt
15 of a message 30 from the application of the automated voice response system 6, the control application interprets the contents of the message 30 and carries out the required actions. Next, the control application returns to the voice response system 6 via the same channel a message 31 of a successful or unsuccessful execution of requested actions. The additional parameters may also be used for transmitting other
20 information such as a report compiled by the server.

The service user 1 receives from the voice response system 6 a message indicating the success status of the requested service. Alternatively, the voice response system 6 can send the information as a short message to the calling subscriber. The short
25 message is sent in real time by establishing a connection 33, e.g., using the CIMD protocol to a short-message center 5 of the cellular phone operator. Next, the short-message center 5 handles the radio-frequency transmission of message 32 to the calling subscriber 6.

30 The application of the voice response system 6 and the Internet server 3 cooperate in real time, which means that the service user can receive the response to the desired action immediately during the progress of the call. Obviously, a plurality of

commands can be issued during a single call.

The voice response system can be replaced by a messaging device of an intelligent network (IP). In the context of the present invention, such devices and others capable of the same functions are more generally called voice message systems.

Now referring to Fig. 2, therein is shown the control sequence of a WWW server (including the actual WWW server, e-commerce software, control server, databases and the like) by means of an IVR (intelligent voice response) device comprising the following steps:

11. The IVR device offers a socket connection to a preset port numbered, e.g., as 2345, of the WWW server where the control server answers.
12. The control server accepts the connection and sends an acknowledge signal to the IVR device.
13. The voice response device requests the subscriber calling the service to submit an ID code and a password.
14. The service user submits the ID code and the password from the keypad of the telephone. The ID code and password are transmitted as DTMF signals to the IVR device.
15. The password is passed to the control server over the socket connection.
16. The control server performs a query on the database to verify the validity of the service user's ID code and password.
17. The result of the query is passed to the control server.
18. The control server passes the validity information of the submitted password to the IVR device via the socket connection.
19. If the password is acceptable, the IVR device reads the menu contents to the service user, while the entry of an unacceptable password or ID code is reported to the calling subscriber and the service is terminated.
20. In the first case, the service user selects one alternative from menu by depressing the respective key of his telephone. The DTMF signal is transmitted to the IVR device. If the calling subscriber selects to terminate the call, the flow diagram

proceeds to item 16.

21. Via the socket connection, the IVR device sends a command to the control server. Some of the needed commands are, e.g.:

- | | | |
|---|-----------|--|
| 5 | "ping 1" | Check if e-commerce server #1 is open |
| | "stats 2" | Statistics query on e-commerce server #2 |
| | "open 1" | Open connection to e-commerce server #1 |
| | "close 1" | Close connection to e-commerce server #1 |
| | "exit" | Terminate connection. |

22. The control server updates or queries the service database in a desired manner.

10 The updates are performed in real time. Thus, the calling subscribers gaining access to the WWW pages at any time have realtime updated information available, e.g., that the e-commerce server to be accessed is closed.

23. The information on the query results or success of data update is passed to the control server.

15 24. Via the socket connection, the control server passes to the IVR device the information on the execution status of requested function (0 = not successful, 1 = successful) and other possible messages such as the results of the database query. Some of the possible response messages are, e.g.:

- | | |
|------------------------------------|---|
| "0 cannot open" | e-commerce server not opened successfully |
| "1 shop opened" | e-commerce server opened successfully |
| "1 visitors; 123 sales; FIM 53421" | Results of statistics information requested by the Stats command |
| "1 shop ok" | Response to Ping command when e-commerce server transaction found valid |
| "1 shop not working" | Response to Ping command when e-commerce server transaction found defective |
| "0 cannot ping" | Response to Ping command found unsuccessful |

20 25. The IVR device processes the response message and query information by issuing a verbal message to the calling subscriber or, alternatively, by sending a text message to the subscriber. The sequence is restarted at item 19; or alternatively

26. The IVR device disconnects the socket connection to the WWW server.

27. A verbal message is issued to the subscriber on the disconnection of the service.

Without departing from the scope and spirit of the invention, embodiments different from those described above may be contemplated. For instance, the implementation
5 of the automated voice response system can be utilizing advanced applications such as text-to-speech synthesis or speech recognition. Furthermore, the application of the automated voice response can be complemented with a pulse signal detection.

Claims:

1. Method for controlling an Internet service such as an e-commerce site, in which method the service provider is given a possibility of controlling and steering the progress of the service

characterized in that

the control commands of the service provider are transmitted via a telephone network (2) to a voice response system (6) that in turn passes the control commands in real time to an Internet server (3).

2. Method according to claim 1, characterized in that said control commands are transmitted as dial tone signals (DTMF).

3. Method according to claim 1 or 2, characterized in that said voice response system (6) transmits the acknowledgement information on a successful control action as a short message to the subscriber (1) controlling the system.

4. Method according to claim 3, characterized in that said voice response system (6) transmits the acknowledgement information on a successful control action as a short message using the CIMD protocol.

5. System for controlling an Internet service, the system comprising an Internet network (4), a plurality of service users (7) and at least one Internet server (3), said system having means for providing commercial services and controlling said services, characterized in that said system includes a voice response system (6) cooperating in real time with said Internet server (3).

6. System according to claim 5, characterized in that said system includes a text message center (5) for transmitting acknowledgement messages to the subscriber (1) controlling the system.

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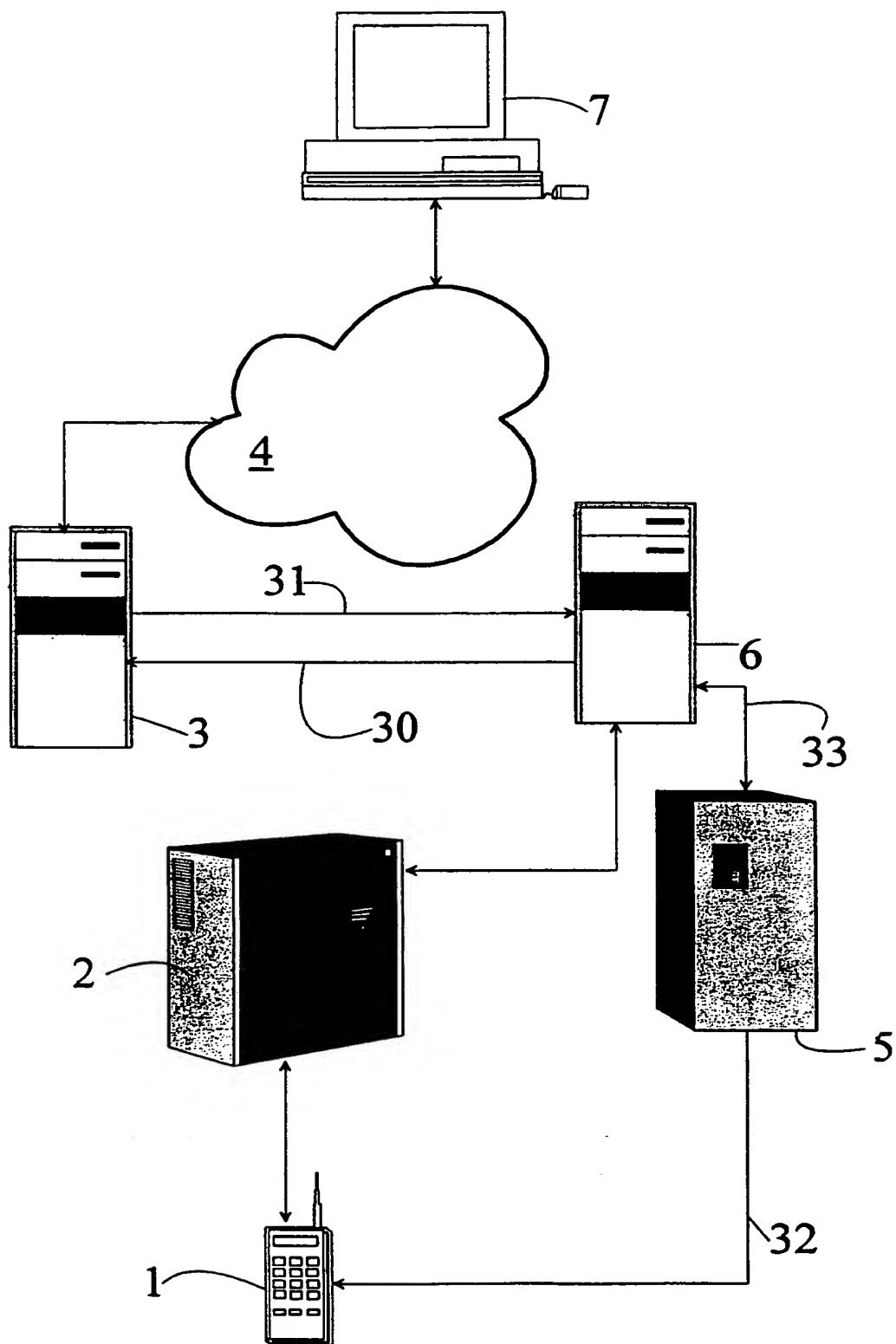


Fig. 1

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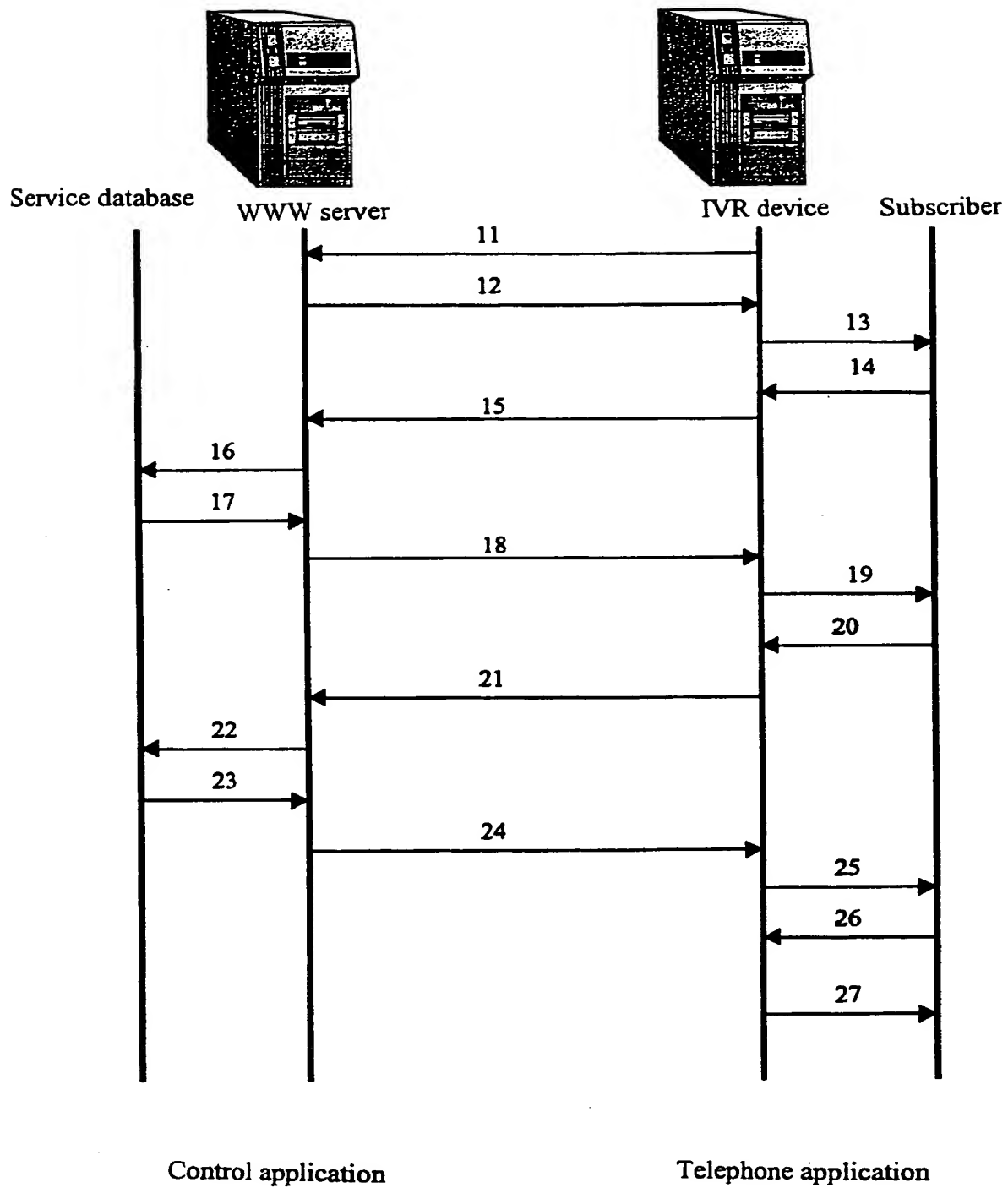


Fig. 2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 99/00630

A. CLASSIFICATION OF SUBJECT MATTER		
IPC7: H04L 12/24, H04L 12/66, H04L 12/58, H04M 11/06 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC7: H04L, H04M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
SE,DK,FI,NO classes as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9821872 A1 (VOIS CORPORATION), 22 May 1998 (22.05.98), page 6, line 33 - page 7, line 35; page 22, line 10 - line 33 --	1,2,5
A	EP 0782318 A2 (INTERNATIONAL BUSINESS MACHINES CORPORATION), 2 July 1997 (02.07.97), column 5, line 11 - column 8, line 11, figure 3, abstract --	1,5
A	WO 9826543 A1 (TELIA AB), 18 June 1998 (18.06.98), page 10, line 2 - line 24, figure 1 --	1,5
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
<ul style="list-style-type: none"> * Special categories of cited documents "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family 		
Date of the actual completion of the international search		Date of mailing of the international search report
15 December 1999		03 -01- 2000
Name and mailing address of the ISA: Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86		Authorized officer Hans Bagge af Berga/AE Telephone No. + 46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 99/00630

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 9813993 A1 (BRITISH TELECOMMUNICATIONS PUBLIC LIMITED COMPANY), 2 April 1998 (02.04.98), figure 1, abstract --	1,5
A	WO 9804065 A1 (BELL COMMUNICATIONS RESEARCH, INC.), 29 January 1998 (29.01.98), page 11, line 16 - page 13, line 23, figure 1 -- -----	1,5

INTERNATIONAL SEARCH REPORT

Information on patent family members

02/12/99

International application No.

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Patent document cited in search report			Publication date	Patent family member(s)			Publication date
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				EP	0914731	A	12/05/99